

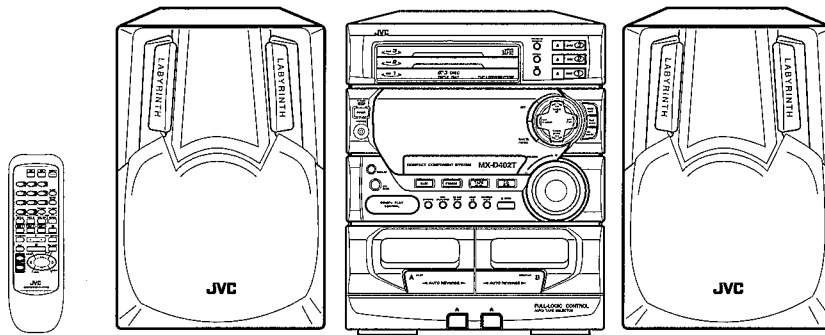
JVC

SERVICE MANUAL

COMPACT COMPONENT SYSTEM

MX-D402T

UNIT No. CA-D402T/SP-D402



Area Suffix

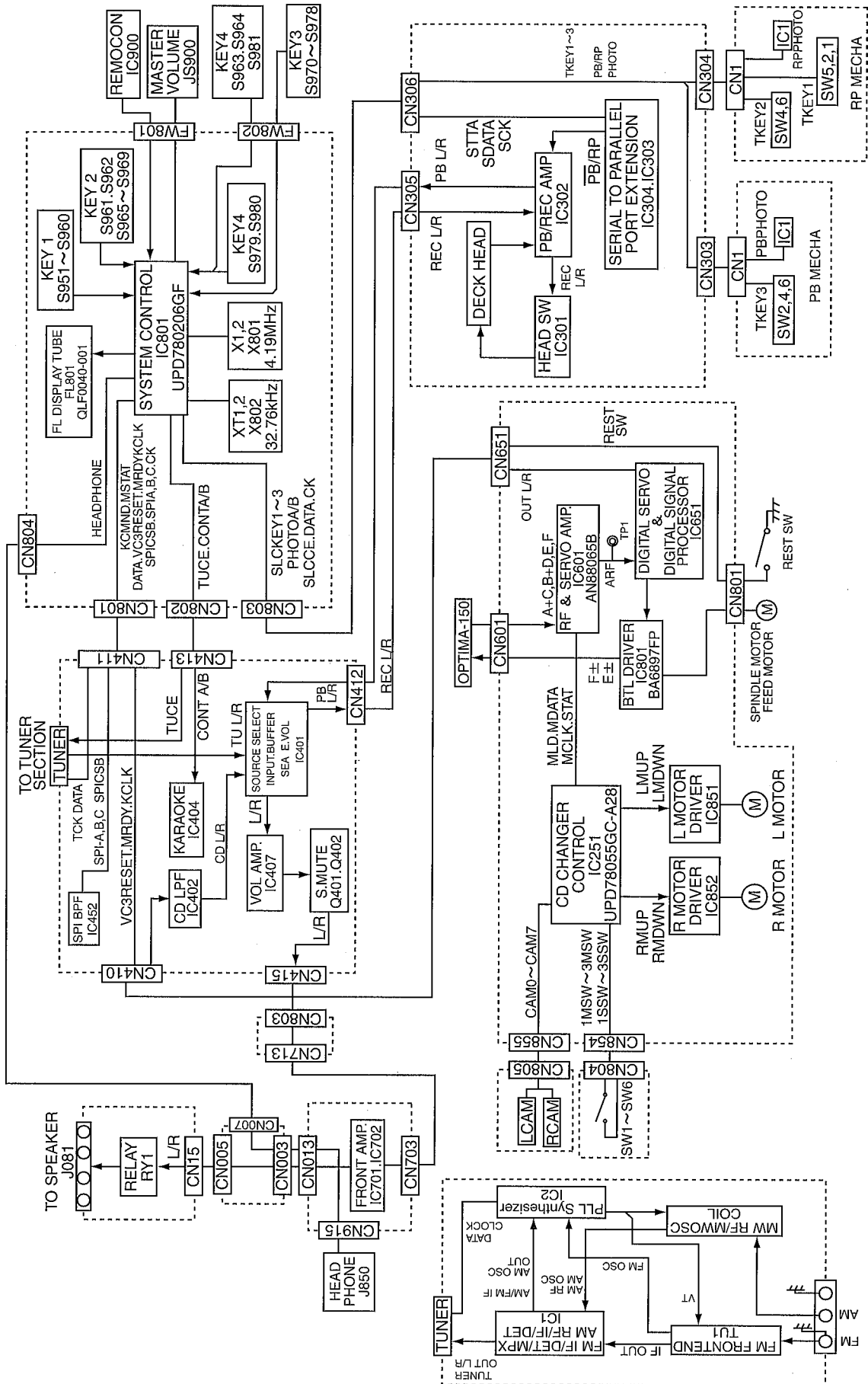
A	-----	Australia
U	-----	Other Areas
UB	-----	Hong Kong
UP	-----	Korea
US	-----	Singapore
UT	-----	Taiwan
UX	-----	Saudi Arabia
J	-----	U.S.A.
C	-----	Canada

COMPACT
disc
DIGITAL AUDIO

Contents

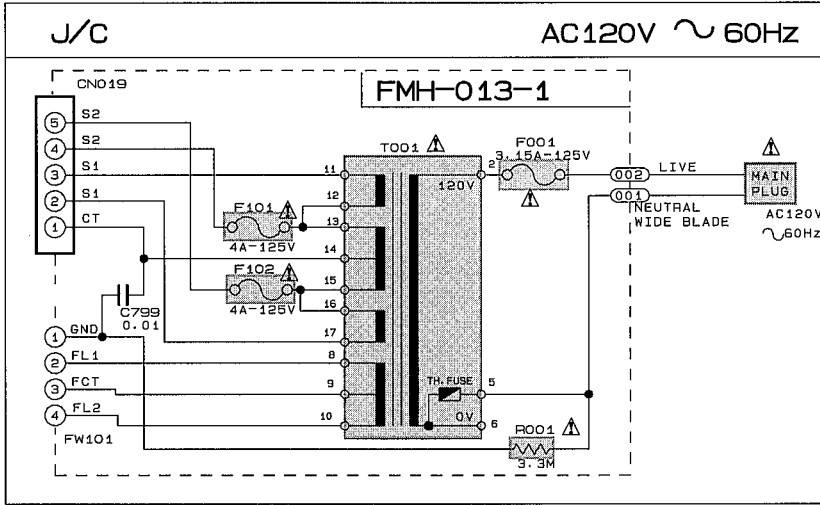
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■ Block Diagrams

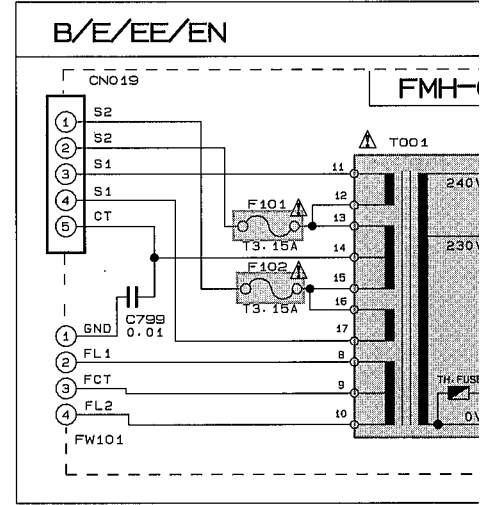


Power Transformer Section

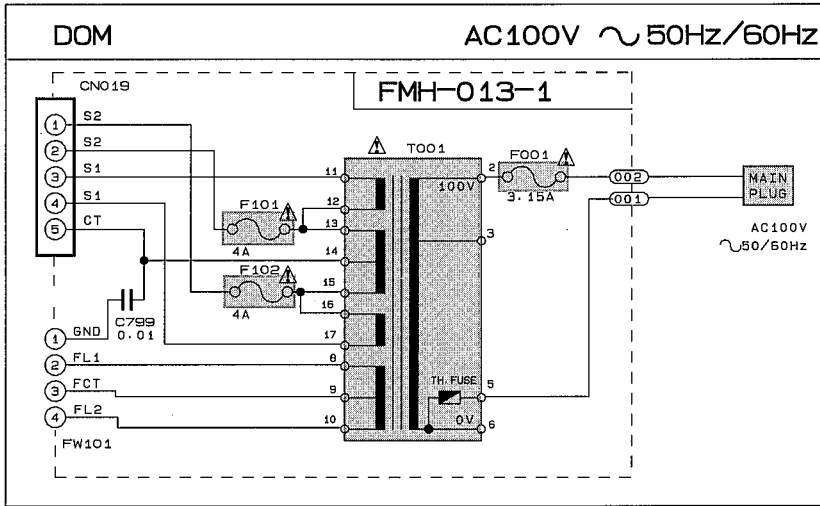
POWER SUPPLY BLOCK



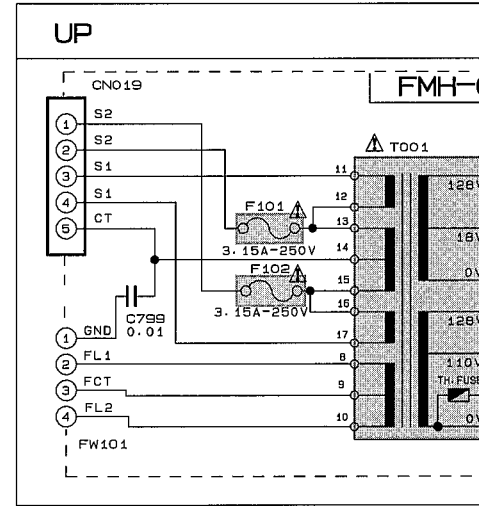
POWER SUPPLY BLOCK



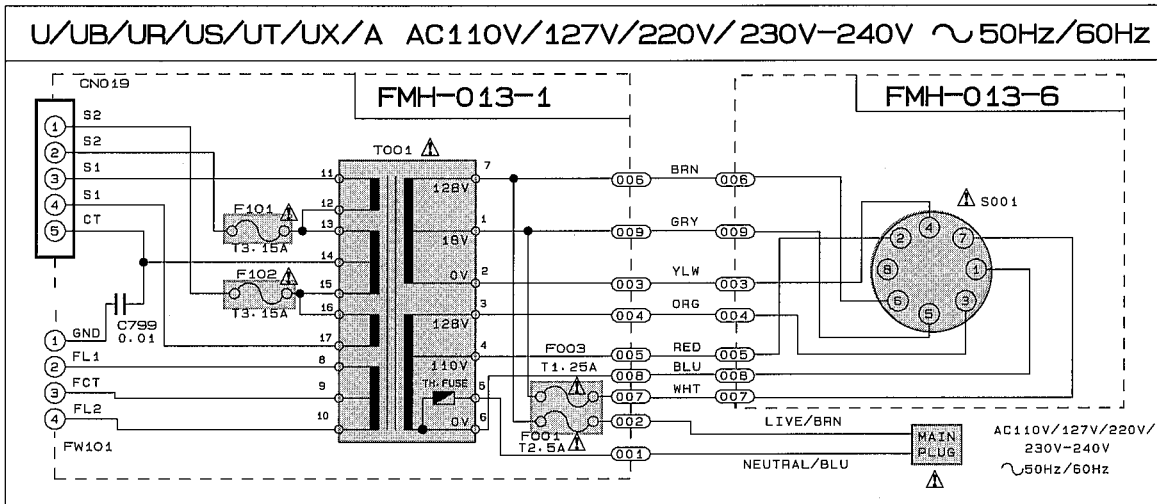
POWER SUPPLY BLOCK



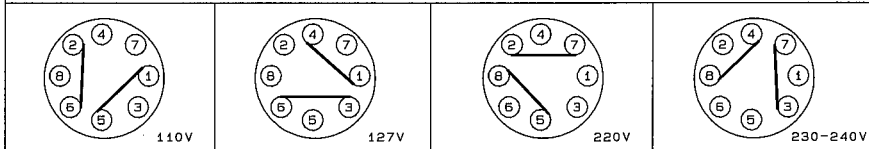
POWER SUPPLY BLOCK



POWER SUPPLY BLOCK



VOLTAGE SELECTOR LOCATION



A

B

C

D

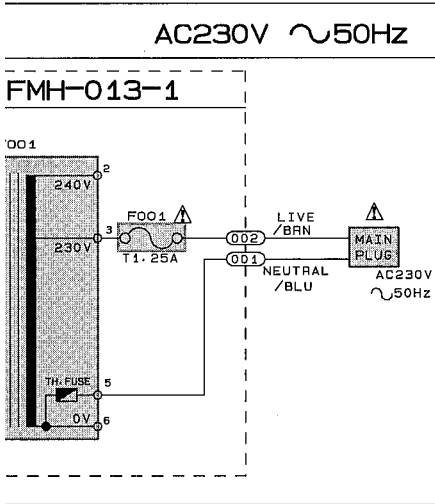
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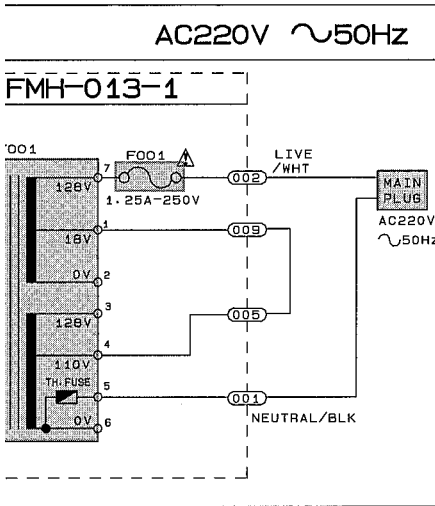
3

2

1



VERSION CODES	
J	: U. S. A.
C	: CANADA
B	: U. K.
E	: CONTINENTAL EUROPE
EE	: EASTERN EUROPE
EN	: NORDIC COUNTRIES
A	: AUSTRALIA
UB	: HONGKONG
UP	: KOREA
UR	: BRAZIL
US	: SINGAPORE
UT	: TAIWAN
UX	: SAUDI ARABIA
U	: UNIVERSIAL EXCEPT ALL OF ABOVE
DOM	: JAPAN



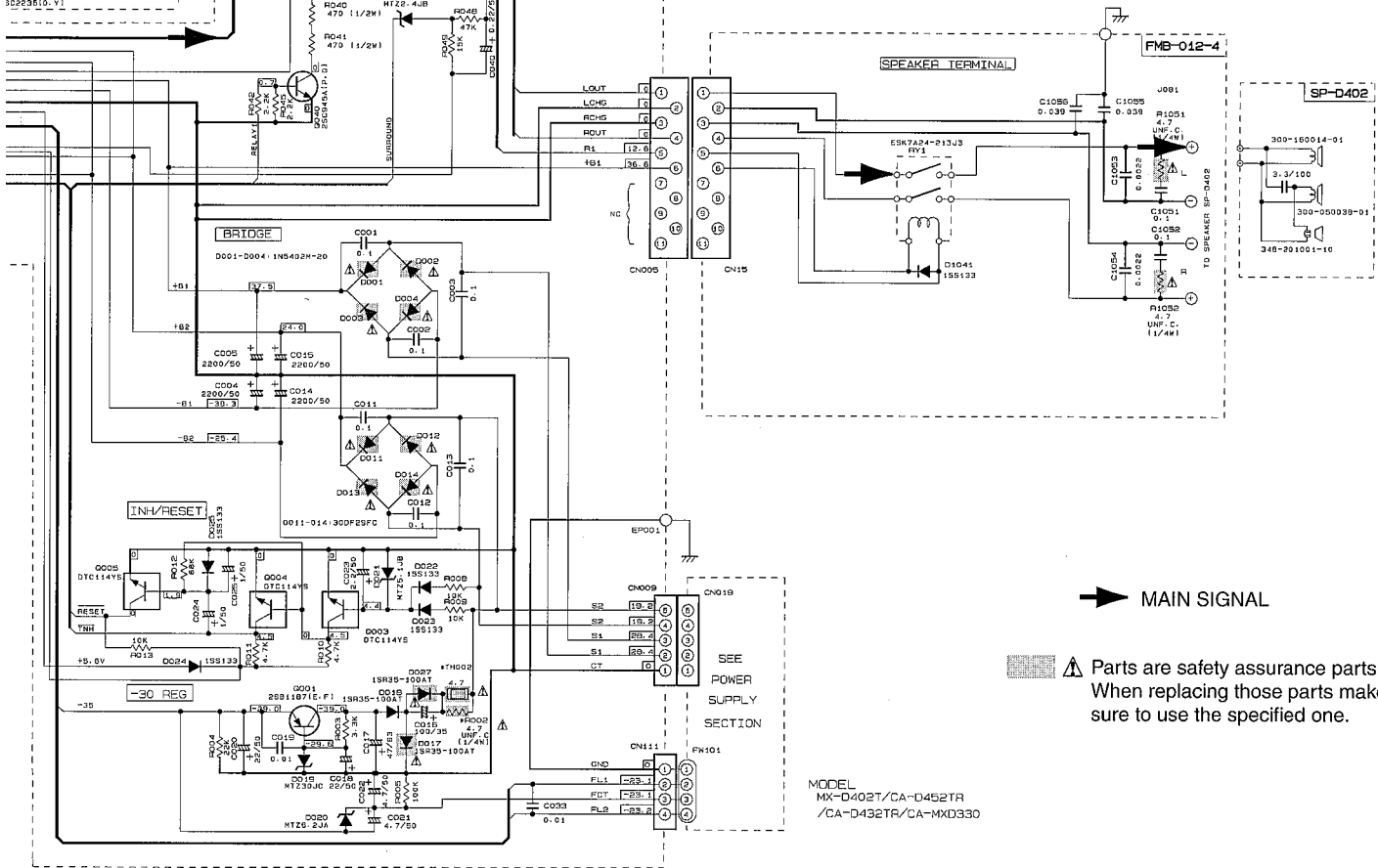
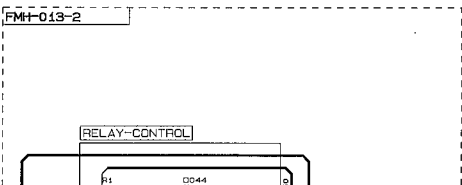
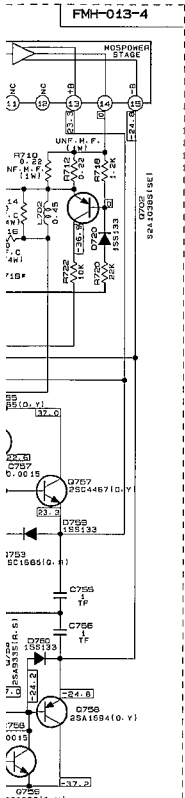
EXPLANATION OF OVERALL OF SCHEMA.
MODEL MX-D402T/CA-D432TR/CA-D452TR/CA-MXD330

SHEET NUMBER	MODEL NUMBERS TO BE APPLIED	CIRCUITS DESCRIPTION
1/11	MX-D402T/CA-D432TR CA-D452TR/CA-MXD330	. PRIMARY WITH MAINS TRANSFORMER
2/11	MX-D402T/CA-D432TR CA-D452TR/CA-MXD330	. DC REGULATORS/AUDIO OUTPUT
3/11	MX-D402T/CA-D432TR CA-D452TR/CA-MXD330	. EXTERNAL INPUT. SOURCE SELECTOR SWITCH
4/11	MX-D402T/CA-MXD330	. TUNER RF/IF/FM MULTIPLEX (ONLY FOR J. C. U. UB. UP. UR. US. UT. UX. A. DOM)
5/11	CA-D432TR/CA-D452TR	. TUNER RF/IF/FM MULTIPLEX (ONLY FOR E. EN. B)
6/11	CA-D452TR	. TUNER RF/IF/FM MULTIPLEX (ONLY FOR EE)
7/11	CA-D452TR	. POLAR STEREO MULTIPLEX (ONLY FOR EE)
8/11	MX-D402T/CA-D432TR CA-D452TR/CA-MXD330	. FL DISPLAY. SYSTEM CONTROL LSI. USER CONTROL KEYS
9/11	MX-D402T	. MIC AMP. ECHO CIRCUIT (ONLY FOR U. UB. UP. UR. US. UT. UX. A)
10/11	MX-D402T/CA-D432TR CA-D452TR/CA-MXD330	. TAPE DECK MECHANISM CONTROL . TAPE CIRCUITS SUCH AS PRE-AMP AND BIAS
11/11	MX-D402T/CA-D432TR CA-D452TR/CA-MXD330	. CD SERVO AND CD SYSTEM CONTROL . CD CHANGER MECHANISM CONTROL

NOTES: MARK [*] IS TO SHOW DEVIATION IN VERSIONS.
 DETAILS ARE EXPLAINED NEAR THE MARK.

Parts are safety assurance parts.
 When replacing those parts make sure to use the specified one.

MODEL MX-D402T/CA-D432TR
 CA-D452TR/CA-MXD330



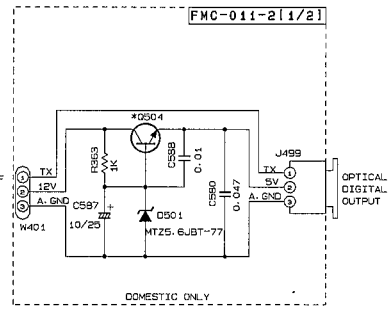
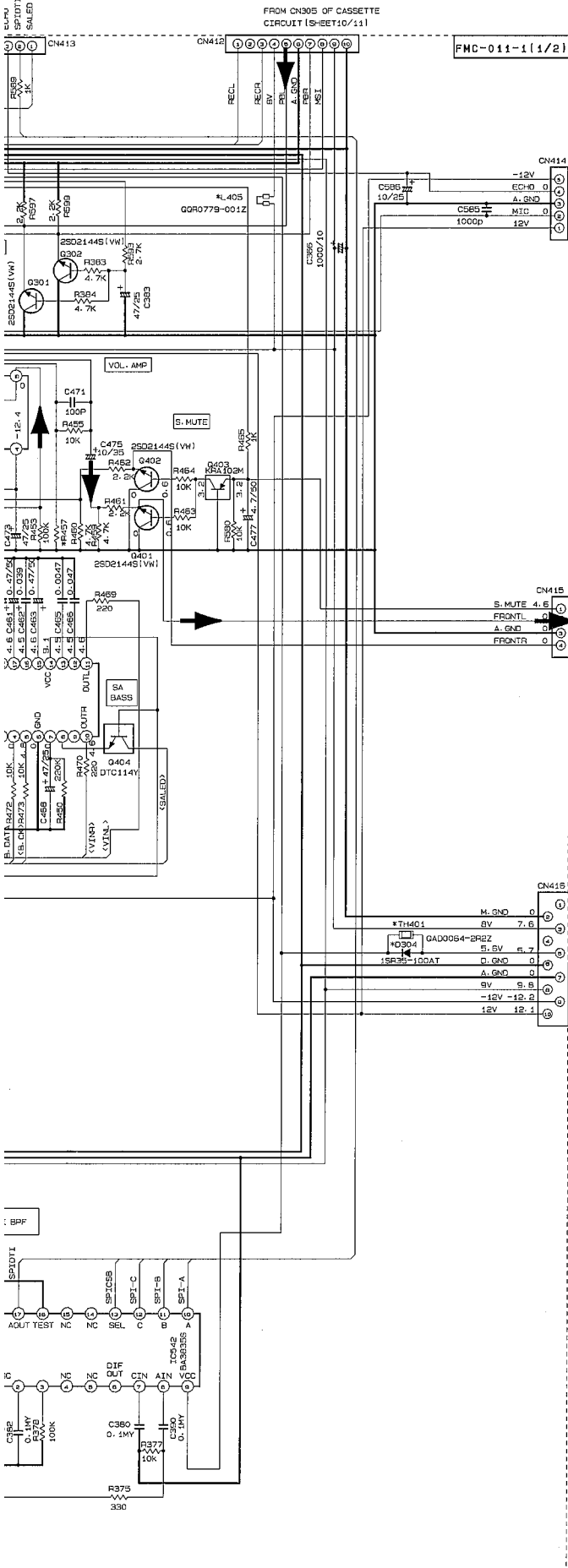
* MARK

	MX-D402T U UB, UP, UR UR, UR, UR, A	CA-D432TR/D452TR B, E EE, EN	MX-D402T C	J	CA-MXD300 DQH
R002	NONE	NONE	NONE	USED	USED
TH002	USED	USED	USED	NONE	NONE
C713, 714	0.1	0.1	0.1	NONE	NONE
C715, 716	0.1	0.1	0.1	NONE	NONE
C717, 718	NONE	NONE	NONE	0.047	0.047
R006	4.7 F. RES (1/4W)	4.7 F. RES (1/4W)	2-B UNF. C. (1/4W)	2-B UNF. C. (1/4W)	2-B UNF. C. (1/4W)
R007	4.7 F. RES (1/4W)	4.7 F. RES (1/4W)	NONE	NONE	NONE
R008	SHORT	SHORT	SHORT	10(1W)	SHORT
R009	NONE	NONE	NONE	10(1W)	NONE
R074	22 F. RES. (1W)	22 F. RES. (1W)	22 F. RES. (1W)	22(2W)	22 F. RES. (1W)
R075	22 F. RES. (1W)	22 F. RES. (1W)	22 F. RES. (1W)	22(2W)	22 F. RES. (1W)
R079	SHORT	SHORT	SHORT	12(2W)	SHORT
R083	SHORT	SHORT	SHORT	15(1W)	SHORT
R030	4.7 F. RES (1/4W)	4.7 F. RES (1/4W)	4.7 F. RES (1/4W)	4.7 UNF. C. (1/4W)	4.7 F. RES (1/4W)
L041A, B42	SHORT	USED (EXCEPT EE)	SHORT	SHORT	SHORT
C040/B41/B42	NONE	USED (EXCEPT EE)	NONE	NONE	NONE
L001	USED	USED (EXCEPT EE)	USED	USED	USED
R21	USED	USED	USED	SHORT	USED

➔ MAIN SIGNAL

⚠ Parts are safety assurance parts. When replacing those parts make sure to use the specified one.

MODEL
MX-D402T/CA-D452TR
/CA-D432TR/CA-MXD300



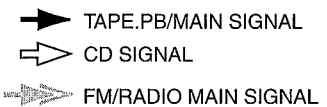
FROM FW202 OF FMB-012-6 MIC BOARD

FROM OF FMB-012-5 CONNECTOR BOARD

FROM CN006 OF FMB-013-9 POWER AMP BOARD

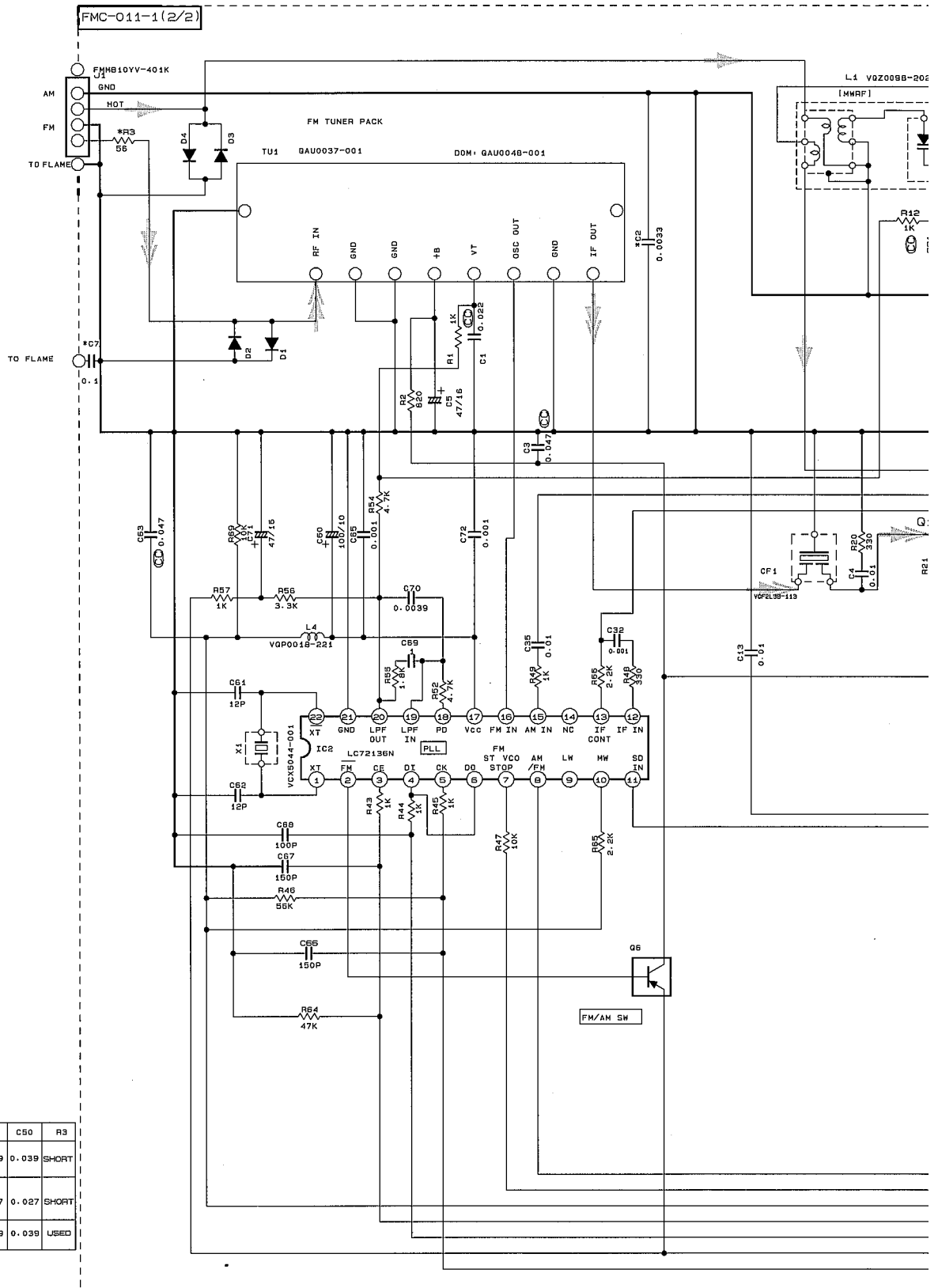
*MARK 0=USED X=NONE

FUNC	SYMBOL	J	C	U-USE-UP UT-UB	A	CA-D452TR/D432TR	EE	CA-MX0330 DOM
KARAOKE	R423-R428	X	X	0	0	X	X	X
	C439-C440	X	X	0	0	X	X	X
	IC404	X	X	0	0	X	X	X
SWITCH	R429-R430	X	X	0	0	X	X	X
	C441-C442	X	X	0	0	X	X	X
	D401-D402	X	X	0	0	X	X	X
	B035/B042	0	0	X	X	0	0	0
MIC	R443, R444	X	X	0	0	X	X	X
	R435, R436	4.7K	4.7K	8.2K	8.2K	4.7K	4.7K	4.7K
GAIN	R457, R458	5.6K	5.6K	7.5K	7.5K	7.5K	7.5K	7.5K
	R555, R556	X	X	X	X	X	X	0
RECORD	C485	X	X	X	X	X	X	0
	Q481-Q483	X	X	X	X	X	X	0
	R481-Q483	X	X	X	X	X	X	0
	R481-R486	X	X	X	X	X	X	0
OPT	R483-D484	X	X	X	X	X	X	0
	CN415	X	X	X	X	X	X	0
	R373	1/4W UNF. C. RES	1/4W FUSIBLE RESISTOR					
	D304	0	X	X	X	X	X	X
	T1401	X	0	0	0	0	0	0
	L402	0	0	0	0	0	0	SHORT
	L403	0	0	0	0	0	0	SHORT
	L404	SHORT	SHORT	SHORT	SHORT	0	0	SHORT
	L405	SHORT	SHORT	SHORT	SHORT	0	0	SHORT
	R352	X	X	X	X	0	0	X
	C453-C455	X	X	X	X	0	0	X
	C484	100P	100P	100P	100P	0.0022	100P	100P
	R361	X	X	X	X	X	X	1/4W FUSIBLE RESISTOR



MODEL MX-D402T
 MODEL CA-D452TR
 MODEL CA-D432TR
 MODEL CA-MX0330

■ Tuner Section



*MARK

	C2-C7	C49	C50	R3
J-C	USED	0.039	0.039	SHORT
DDM	SHORT	0.027	0.027	SHORT
U-A	SHORT	0.039	0.039	USED

	CONDITION	PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
IC1	FM NO SIGNAL		2.0	0.5	0	2.0	5.2	5.2	0	0	0.2	5.2	5.2	1.0	1.0	4.6	3.8	3.8	1.4	0	1.3	1.1	2.0	2.0	5.2	2.0
	FM 80GB STEREO		2.0	0.5	0	2.0	5.2	5.2	1.1	0	0.2	0	0	1.0	1.0	4.5	4.1	3.9	1.4	0	1.2	1.1	2.0	2.0	5.2	2.0
	AM NO SIGNAL		2.0	0.5	0	2.0	5.0	5.2	0	0	0.2	5.2	5.2	1.0	1.0	4.8	2.2	0	1.4	1.4	1.5	1.6	2.0	2.0	5.2	2.0
IC2	FM NO SIGNAL		2.7	0	0	4.9	4.9	4.9	3.8	3.8	2.0	4.1	5.2	0	0	0	0	2.6	5.2	1.0	1.0	3.7	0	2.7		

A

B

C

2-36

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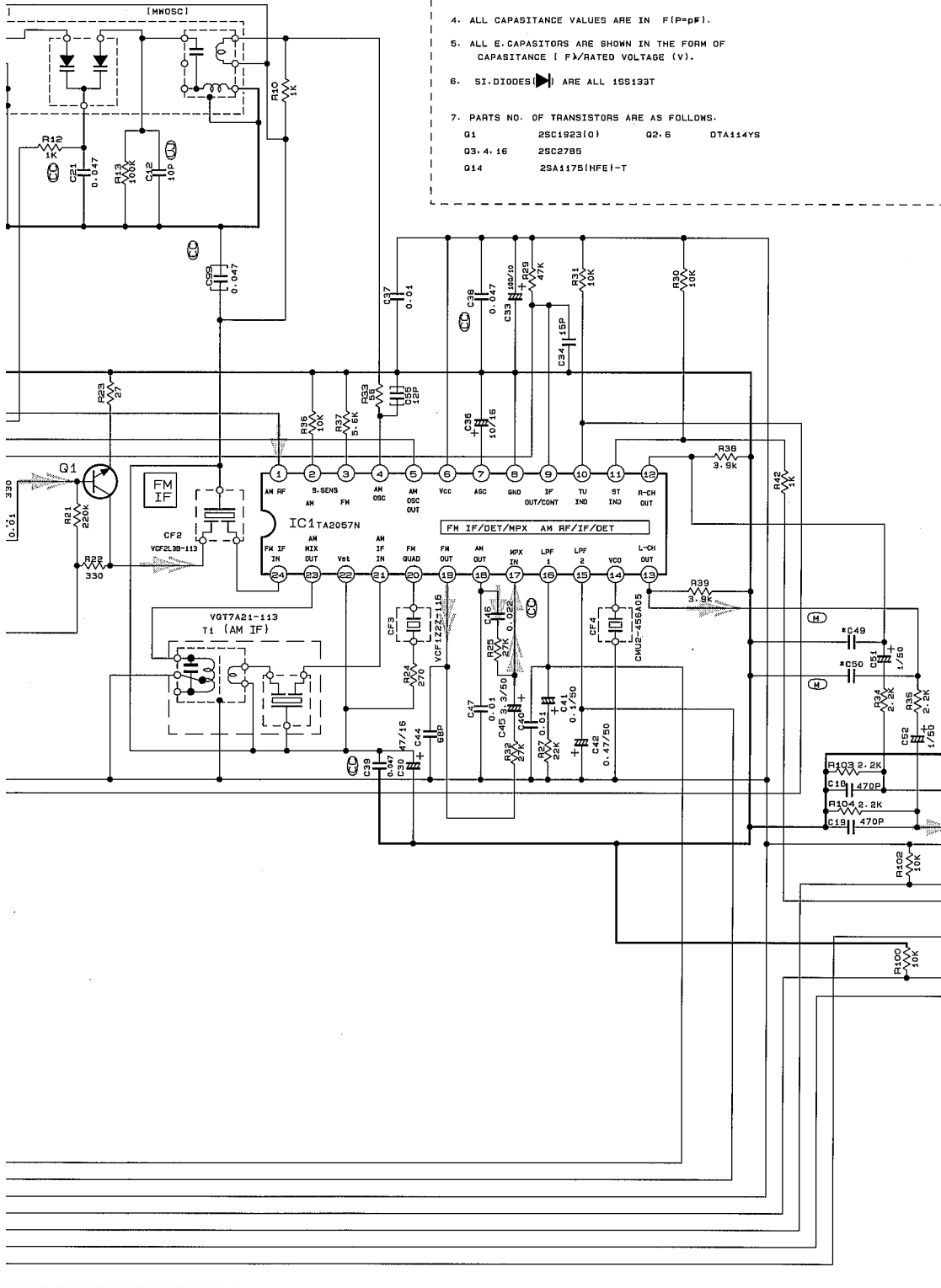
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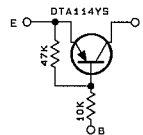
VQZ009B-202



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER.
2. ALL RESISTORS ARE 1/6W 5% CARBON RESISTOR.
3. ALL RESISTANCE VALUES ARE IN OHM ().
4. ALL CAPASITANCE VALUES ARE IN F(P=pF).
5. ALL E. CAPASITORS ARE SHOWN IN THE FORM OF CAPASITANCE (F)/RATED VOLTAGE (V).
6. SI. DIODES ARE ALL 1SS139T
7. PARTS NO. OF TRANSISTORS ARE AS FOLLOWS.

8. INSIDE OF DIGITAL TRANSISTORS ARE SHOWN AS FOLLOWS.



- | | | | |
|-----------|-----------------|------|----------|
| Q1 | 2SC1923(O) | Q2-5 | DTA114YS |
| D3, 4, 16 | 2SC2785 | | |
| D14 | 2SA1175(HFEI-T) | | |

TUNER GND
TUNER R
TUNER L
TUNER +B
DATA
MPX
CLOCK
PERIOD
Vc/FM+H

FROM EXTERNAL SIGNAL INPUT SECTION

Tr No.	Q1			Q6			Q16		
PIN NO.	E	C	B	E	C	B	E	C	B
FM 87.5MHz NO SIGNAL	0	8.3	0.8	9.8	9.7	0	1.0	3.5	1.6
AM 522KHz NO SIGNAL	0	0	0	9.8	0	9.7	1.0	3.5	1.6
Tr No.	Q2			Q3			Q4		
PIN NO.	E	C	B	E	C	B	E	C	B
AM 522KHz NO SIGNAL	2.0	2.0	0.1	0	0	0.7	0	0	0.7
AM 144KHz NO SIGNAL	2.0	2.0	2.0	0	0	0.1	0	0	0.1

J/C/U/A/DOM
MX-D402T
CA-MXD330

AM RADIO SIGNAL
FM/RADIO MAIN SIGNAL

System Control & Operation Switch Section

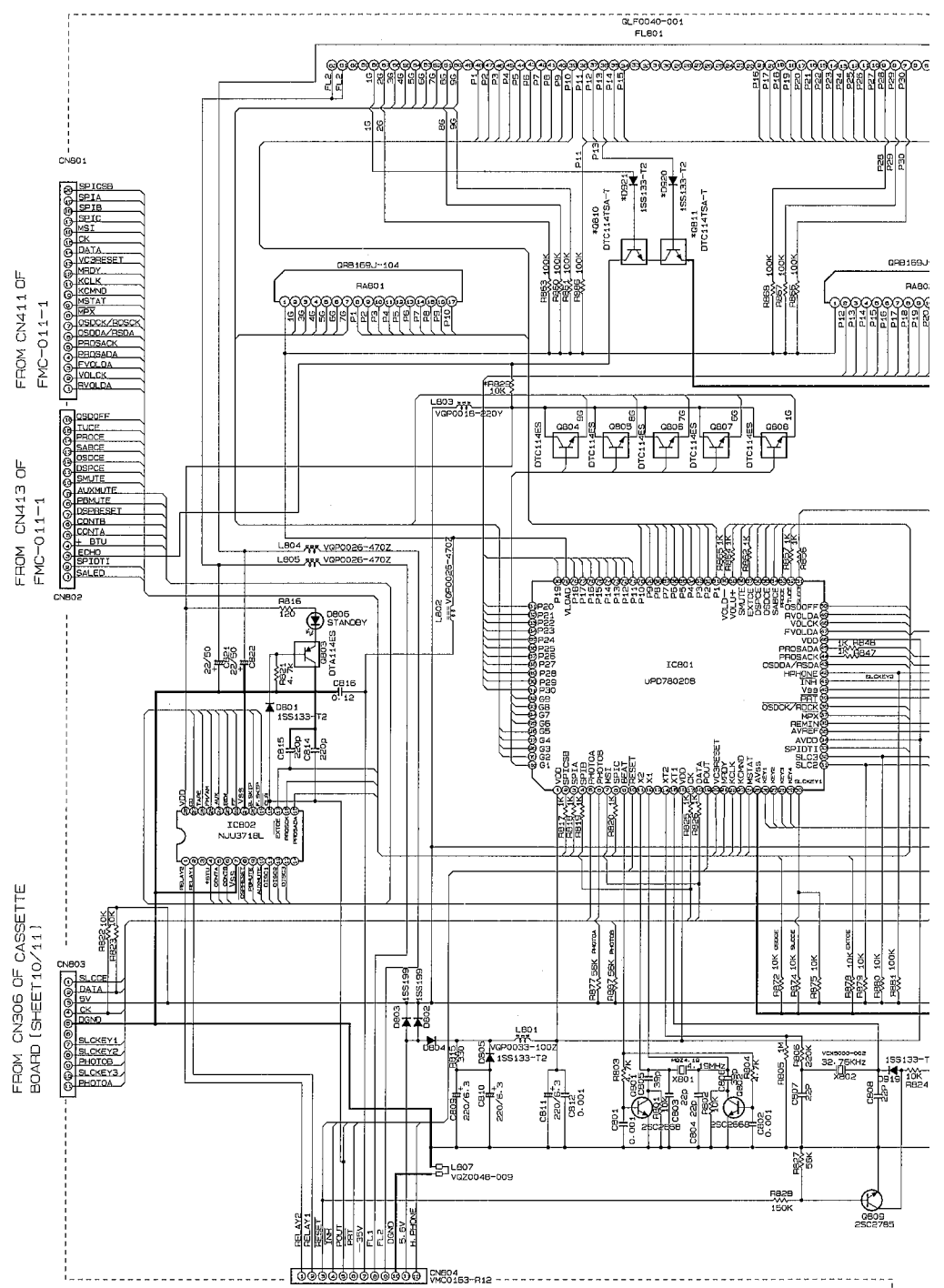
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*MARK

FROM CN07 OF FMH-013-2

MODEL	VERSION	R992	R993	R990	R991	S982	S983	S984	S985	S963	QB10/QB11	D920/D921	R829
MX-D402T	J-C	18K	18K	220K	33K	NONE	NONE	NONE	NONE	USED	NONE	NONE	NONE
	U	18K	68K	220K	33K	NONE	NONE	NONE	NONE	USED	USED	USED	USED
	UR	18K	18K	220K	33K	NONE	NONE	NONE	NONE	USED	USED	USED	USED
CA-D452TR/D432TR	A	18K	68K	220K	33K	NONE	NONE	NONE	NONE	USED	USED	USED	USED
	B/E/EN	18K	68K	220K	82K	USED	USED	USED	USED	USED	NONE	NONE	NONE
MX-D502T	EE	68K	18K	220K	82K	USED	USED	USED	USED	USED	NONE	NONE	NONE
	J/C	18K	18K	47K	33K	NONE	NONE	NONE	NONE	USED	NONE	NONE	NONE
CA-D702T	U/UP/US/UT/UX	18K	68K	47K	33K	NONE	NONE	NONE	NONE	USED	USED	USED	USED
	UR	18K	18K	47K	33K	NONE	NONE	NONE	NONE	USED	USED	USED	USED
	A	18K	68K	47K	33K	NONE	NONE	NONE	NONE	USED	USED	USED	USED
CA-D752TR	B/E/EN	18K	68K	47K	82K	USED	USED	USED	USED	USED	NONE	NONE	NONE
	EE	68K	18K	47K	82K	USED	USED	USED	USED	USED	NONE	NONE	NONE
CA-MXD330		68K	68K	220K	82K	NONE	NONE	NONE	NONE	USED	NONE	NONE	NONE

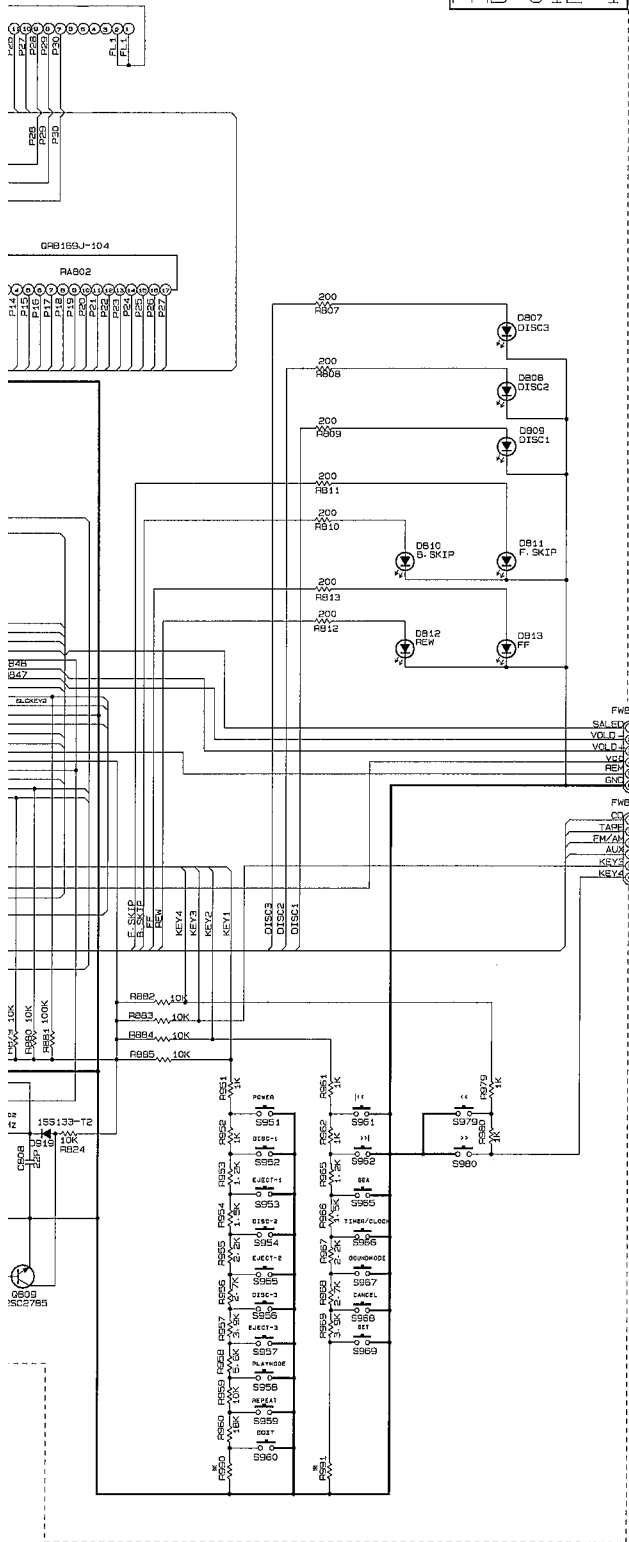
A

B

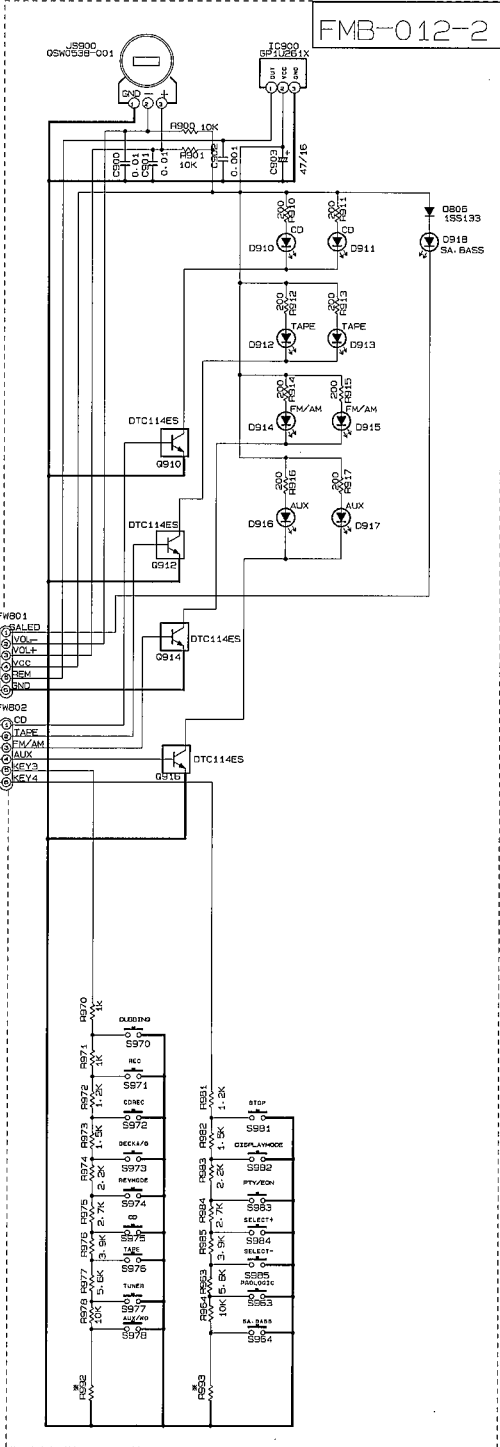
C

D

FMB-012-1



FMB-012-2



NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL. CONDITION — TAPE PB MODE
2. VALUES UNLESS SPECIFIED

RESISTORS ARE 1/4W ±5% CARBON RESISTOR.
 ALL RESISTANCE VALUES ARE IN OHM (Ω).
 ALL CAPACITORS ARE CERAMIC CAPACITOR ON MOUNTED CAPACITOR.
 ALL CAPACITANCE VALUES ARE IN PICOFARAD (pF).
 ALL INDUCTANCE VALUES ARE IN MILLIHENRY (mH).
 ALL ELECTROLYTIC CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
 ALL DIODES ARE 1N4148

- MODEL MX-D402T
- MODEL CA-D452TR
- MODEL CA-D453TR
- MODEL CA-MX0330
- MODEL MX-D602T
- MODEL CA-D702T
- MODEL CA-D752TR

■ Mic Section

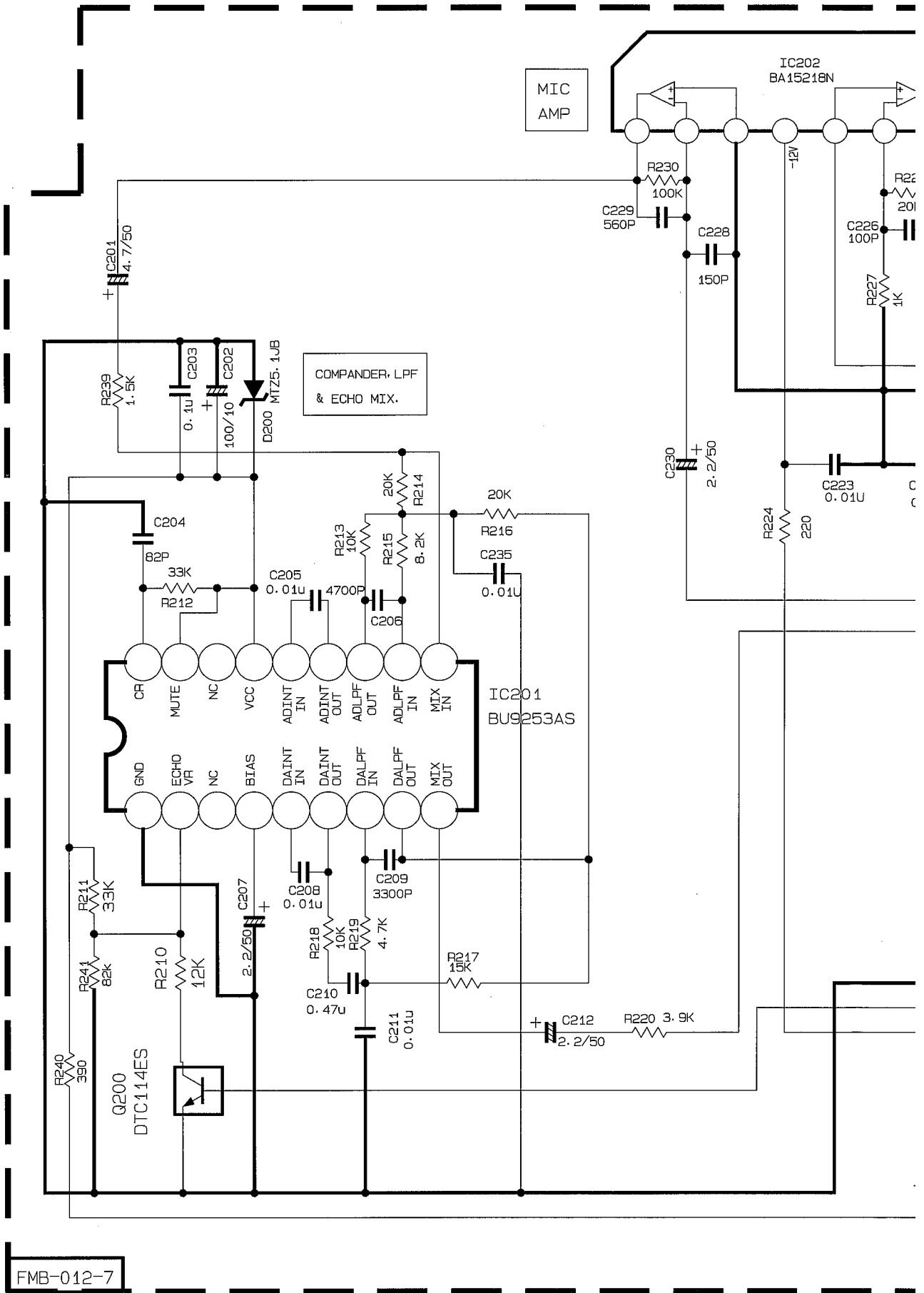
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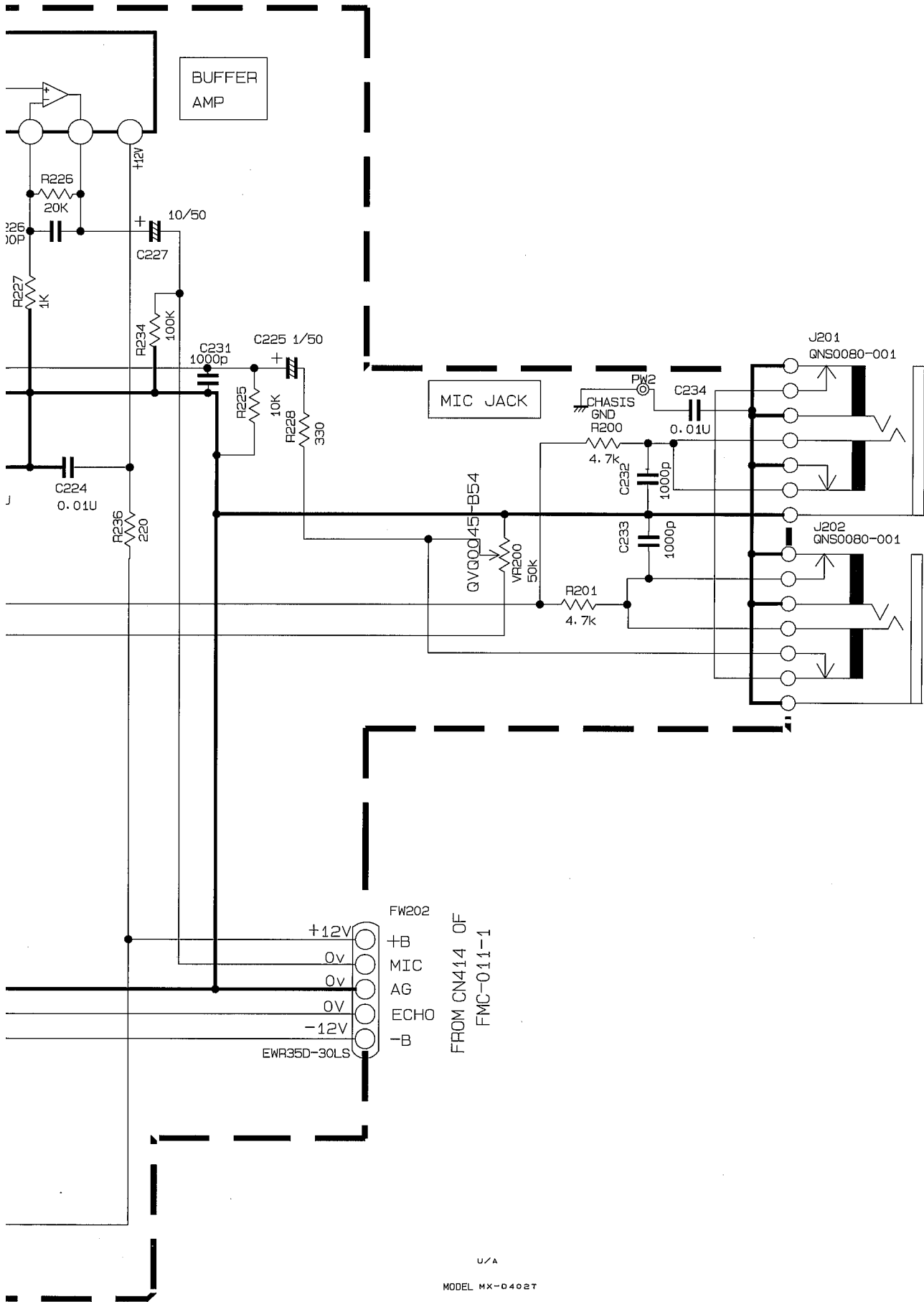
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FMB-012-7



Head Amplifier & Mechanism Control Section

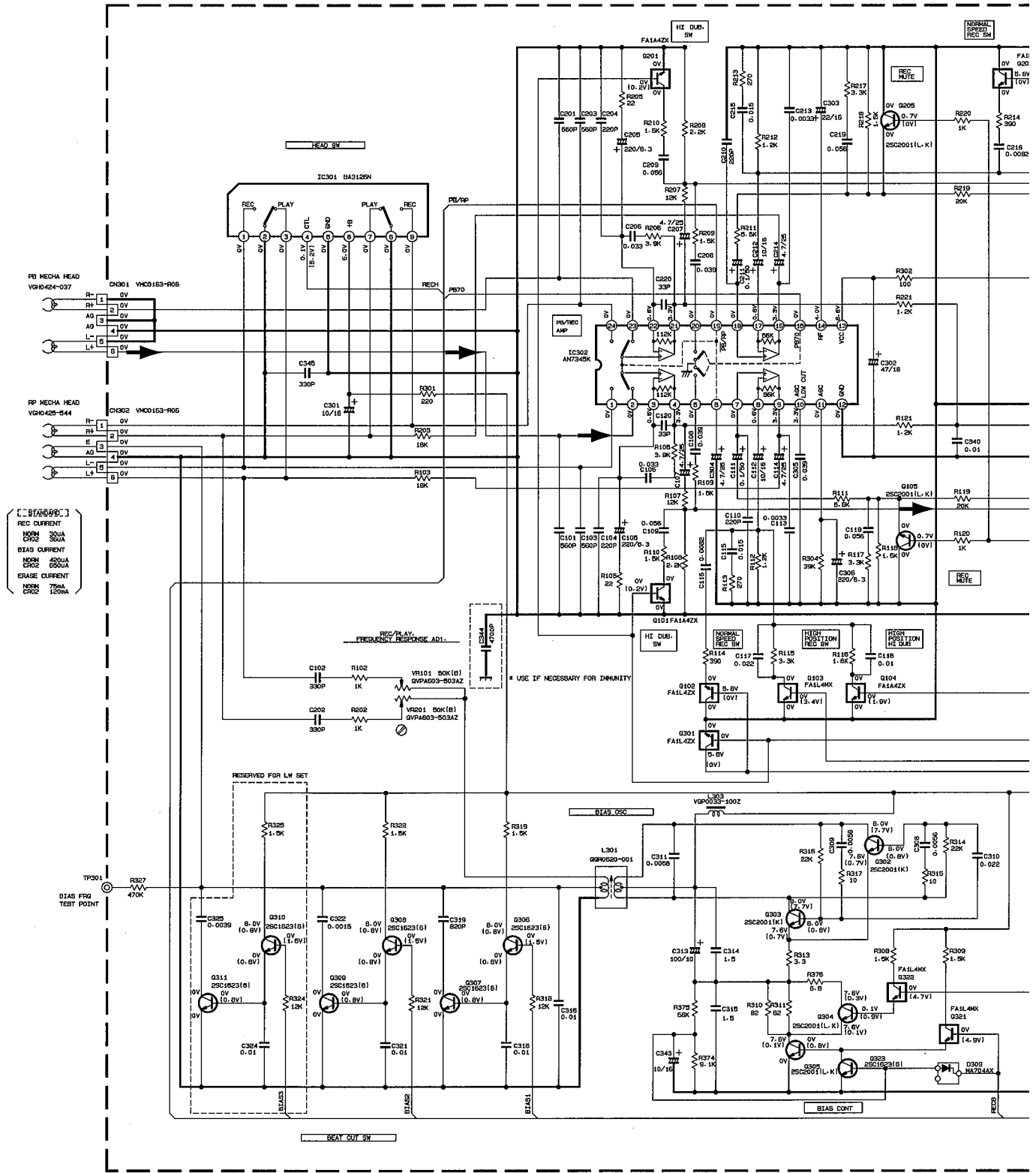
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1



- [STANDARD]
- REC CURRENT
 - NORM 300A
 - CRC 300A
 - BIAS CURRENT
 - NORM 400A
 - CRC 600A
 - ERASE CURRENT
 - NORM 700A
 - CRC 1200A

NOTES

1. VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER OR OSCILLOSCOPE WITHOUT INPUT SIGNAL. () IS INVERT MODE
2. UNLESS OTHERWISE SPECIFIED
- ALL RESISTANCE VALUES ARE IN OHM(Ω).
- ALL CAPACITORS ARE CERAMIC CAPACITOR
- ALL CAPACITANCE VALUES ARE IN μF(μF).
- ALL INDUCTANCE VALUES ARE IN μH(μH).
- ALL E. CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).
- PP PLYPROPYLENE CAPACITOR

TABLE 1. DIGITAL TR LIST

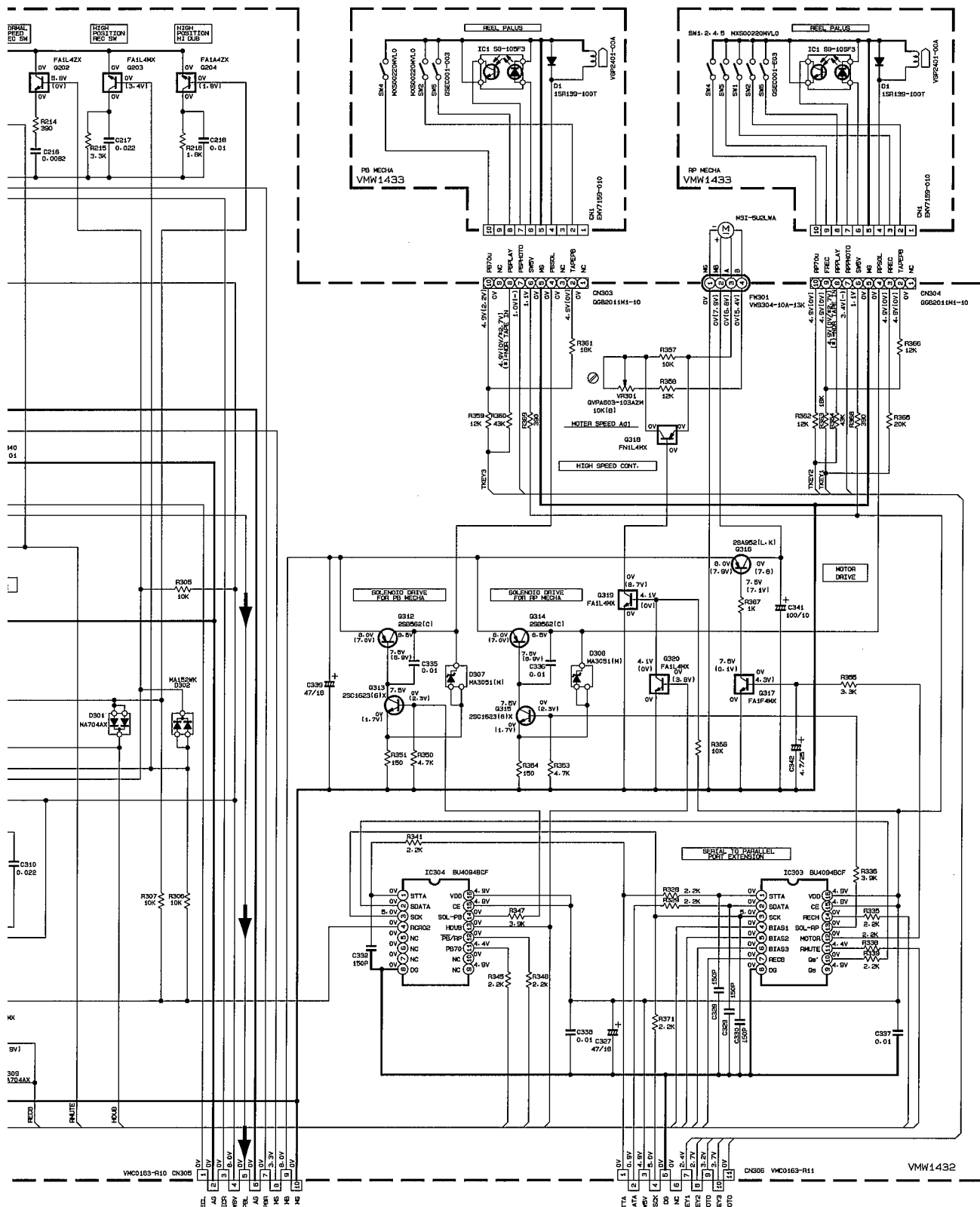
PART. NO	CONSTRUCTION	REF. NO
FA14K		Q310
FA14Z		Q101/Q201 Q104/Q204
FA14Z		Q102/Q202 Q301
		Q317
		Q103/Q203 Q319 Q320/Q321/Q322

A

B

C

D



- Q317
- Q103/Q203
- Q319
- Q320/Q321/Q322

➔ TAPES.PB/MAIN SIGNAL

CD Servo & Changer Mechanism Control Section

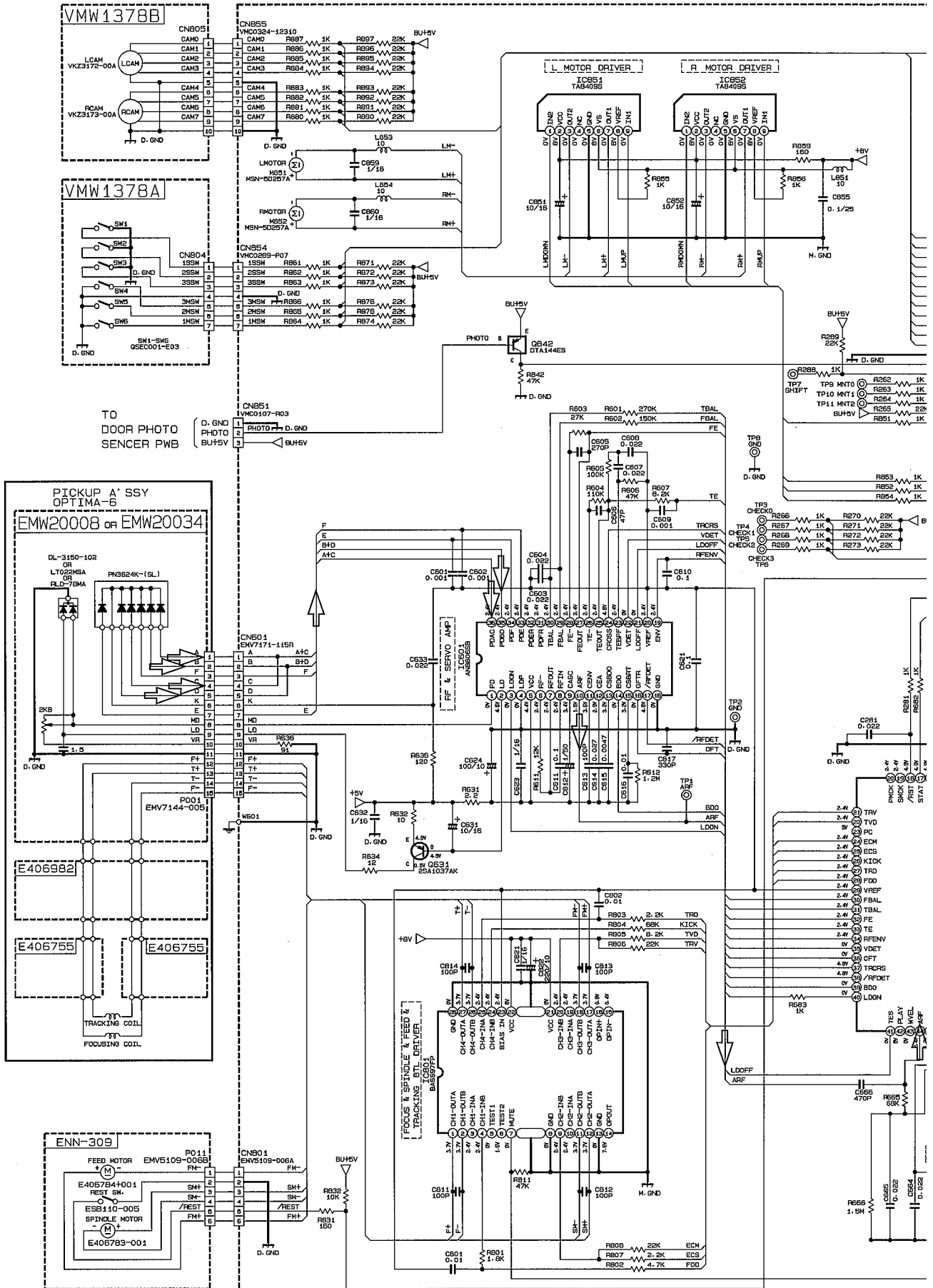
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4

3

2

1



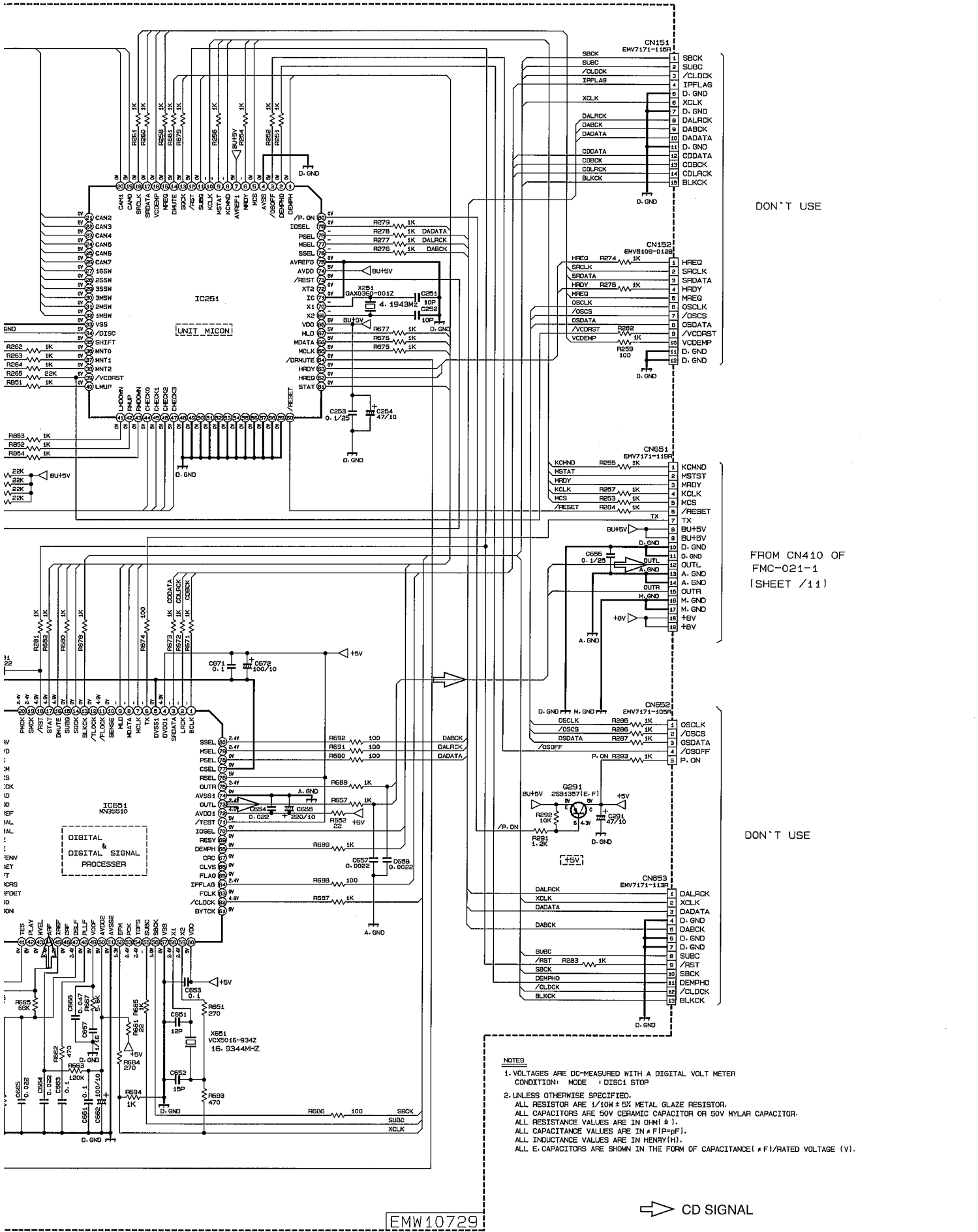
A

B

C

2-40

D



DON'T USE

FROM CN410 OF
FMC-021-1
(SHEET /11)

DON'T USE

- NOTES**
- VOLTAGES ARE DC-MEASURED WITH A DIGITAL VOLT METER
CONDITION: MODE: DISC1 STOP
 - UNLESS OTHERWISE SPECIFIED:
ALL RESISTOR ARE 1/10W ± 5% METAL GLAZE RESISTOR.
ALL CAPACITORS ARE 50V CERAMIC CAPACITOR OR 50V NYLON CAPACITOR.
ALL RESISTANCE VALUES ARE IN OHM (Ω).
ALL CAPACITANCE VALUES ARE IN P (pPF).
ALL INDUCTANCE VALUES ARE IN HENRY (H).
ALL E-CAPACITORS ARE SHOWN IN THE FORM OF CAPACITANCE (μF)/RATED VOLTAGE (V).

EMW10729

➔ CD SIGNAL